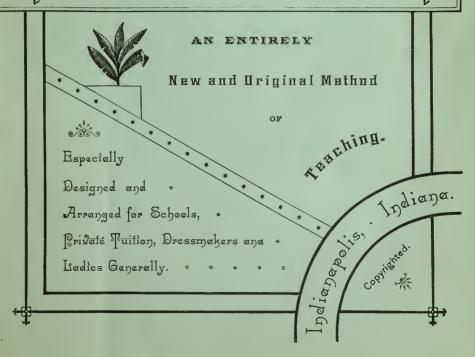


# Science and Geometry of Dress.





# SCIENCE AND GEOMETRY OF DRESS

BEING A COMPLETE MANUAL OF INSTRUCTION IN THE

ART OF DESIGNING, DRAFTING AND CUTTING

# LADIES' AND CHILDREN'S

# WEARING APPAREL.

AN ENTIRELY

New and Original Method of Teaching.

SPECIALLY DESIGNED AND ARRANGED FOR SCHOOLS, PRIVATE TUITION, DRESS-MAKERS AND LADIES GENERALLY.

15,6

By MRS. L. L. JACKSON,
author of the "family dress guide," etc.,
INDIANAPOLIS, IND.



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# Manner and Order of Taking Measures.

- 1st. Breast—Draw the tape-line loosely over the fullest part of the bust, measuring across from arm to arm.
- 2d. Around Waist—Take this measure tight or loose, as you wish the dress at this part.
  - 3d. Around the top of the Arm—Take the measure close.
- 4th. Length of Waist under the arm—Place the tape-line directly underneath the arm-curve, and measure straight down to the waist or hip, as long as the dress should be worn.
- 5th. Length of Waist up Center of Front—Take this measure from the waist or bottom of belt as low down at front as the dress can be worn, up to the neck as high as may be desired.
- 6th. Around the Neck—Allowing the tape-line to meet closely around, so as to admit the end of the fore-finger underneath.
- 7th. Shoulder—Measure down the shoulder-seam, from the neck to the top of the arm-size, as long as fashion or taste may require.
- 8th. Across the Back—Draw the tape-line directly across the back, over the shoulder-blades from arm to arm.
- 9th. Length up Center of Back—This measure should be taken from the bottom of the waist or belt, to the neck as high as you wish the dress.

SUGGESTIONS ON THE POSITION OF THE PERSON WHILE BEING MEASURED; ALSO, ON THE PROPER MANNER OF PLACING THE

TAPE-LINE AT THE DIFFERENT POINTS OF THE FORM.

While being measured, the lady should stand in a natural position, viz., erect, and with arms down.

To prevent mistakes by beginners, or those unpracticed, it is advisable to take the measures over a well-fitting dress.

For Breast—The end of the tape-line should be placed near the lower part of arm-curve, in front, not underneath, pressing sufficiently to feel the muscle of the arm, at the same time allowing the tape-line to pass over the fullest part of the bust, in a curved direction, until it reaches the same muscle in front of the arm at the opposite side of the breast. The measure across the bust can be made tight or loose, according to the manner in which the tape-line is drawn over the bust.

Around the Waist—The tape-measure should be drawn tight, so as to allow for its being taken over the dress.

Arm-Size—Take the measure around that part of the arm of the dress where the sleeve is sewed in, drawing the tape-line loose, or tight, according to the size of the person. As a general rule, for a large-sized arm, this measure should be taken closer than for a medium-size or a small arm. In judging of the correct size, measure and compare with the arm-size of the dress the lady has on.

Length of Waist under the Arm—The tape-line should be placed directly underneath the arm, and the measure taken straight down to the bottom of the waist, on the hip as long as the dress, at this part, can be worn.

Length up Center of Front—This measure should be taken from the bottom of the waist or belt, as low down as is natural for the dress to be worn, up to the neck at front.

In taking this measure be careful and accurate, as it determines the height of the neck at front, and also forms a basis in finding the slope of the shoulder.

If this measure is taken low down on the waist place the tape-line as low, in proportion, when taking the measure up the center of front.

Both measure of waist and up center of front serve an important part in regulating the slope of the shoulder. Neck—Do not measure over the dress or collar, but allow the tape-line to just meet around the neck with end of forefinger underneath. Too loose a measure at this part will cause too much fullness on the upper part of the shoulder, near the neck.'

It is always better to take a snug measure at this part, then stretch the neek of the dress before putting on the band.

Shoulder—In measuring this part of the form, place the tapeline up to the side of the neck, as high as the band of the dress; then measure down the shoulder-seam, from the neck to the top of arm-size, the desired length.

For ladies with large bust; also, for loose waist and wrappers, the shoulder-measure should be taken from  $\frac{1}{2}$  to 1 inch longer. This gives a better proportion in drafting the pattern.

Across the Back—Place the end of the tape-line directly at the arm, passing it over the shoulder-blades from arm to arm.

Length up Center of Back—The end of the tape-line should be placed on the waist, below the belt, as low down as the dress can be worn, then measure up to the back of the neck as high as you wish the neck of the dress.

In finding the proportion of the several parts of the form, by the process of measuring just given, it is important to remember that upon the accuracy of the measures and their correct application in drafting depends the perfect fit of the garment. It is also to be understood that the method of measurement previously described is applicable alike to every style of garment, whether loose-fitting or tight, with this difference, viz., that for loose and half-loose garments, an addition of 1 or 2 inches should be made to the breast-measure when drafting, and from 2 to 3 inches should be added to the measure around the waist for fullness to correspond. When taking measures write in same order as given below:

### Standard Measures.

To be used in drafting while under instructions. Patterns when drafted will fit any average form without alteration.

INCHES.

16 —Breast.

24 — Around the Waist.

15 —Arm-Size.

8 —Length of Waist, under the Arm.

13 —Length up Center of Front.

12 — Neek.

 $5\frac{1}{2}$ —Shoulder.

12 — Across the Back.

 $15\frac{1}{2}$ —Length up Center of Back.

## Sleeve Measures.

#### INCHES.

17—Top at Arm.

16—Length Inside.

8-Around the Hand.

12—Around the Elbow.

#### Skirt Measures.

#### INCHES.

40—Center of Front.

41—Side.

42—Center of Back.

# Skirt-Lengths for Train Dress.

#### INCHES.

40 —Center of Front.

 $40\frac{1}{2}$ —Seam Next Front.  $42\frac{1}{2}$ —Seam at the Side. 46 —Seam Next Back.

48 —Center of Back.

Allow for all seams except neck and arm-size.

## THE

# SCIENCE AND GEOMETRY OF DRESS.

# ELEMENTARY RULES AND DEFINITIONS.

# LESSON 1.

**Diagram 1**—This is designed to represent the front of dresswaist in its general shape and outline, with the names and location of the points, curves and lines forming the basis of the measurements used in drafting the front of dress-waist.

**Piagram 2**—This is designed to show the proper position of the front dress-guide on the goods in the first stage of drafting.

The heavy line, running parallel with the front edge of dress guide, indicates the two selvage-edges of the dress goods placed together in position for drafting.

The dots composing the two lines running across the diagram near its center, represent the measurement of the breast; and the dots composing the line running across the diagram near the bottom denote measurement around the waist.

The figures and large dots, marked 16 · 16 · breast; also, 24 · 33 · and 42 · around the waist, denote average measures used by students in drafting while under instructions.

The 1-inch space between the edge of dress-goods and the front edge of the dress-guide, denotes the space allowed for hem or curve and is required for all waists which are open at the center of front.

# How to Draft the Front of Dress-Waist.

[OPEN AT THE CENTER.]

The Proper Position of Front Guide on the Goods when Dotting at the Measures for Breast and Waist.

First, arrange the dress-goods or lining in the following position, viz.: Fold the goods double, by placing the two selvage-edges exactly together, and directly in front, with the top or upper end of the goods at the left-hand side.

RULE 1—Place the front guide in the position represented by diagram 2, viz.: With the point of front-neck, resting at the top or upper end of the goods, and the front edge of the guide placed parallel with and 1 inch distant from the selvage-edge of the dress-goods all the way down; then draw a line along the front-edge of the guide from the front-neck-point to the bottom of the waist. This is called the hem line.

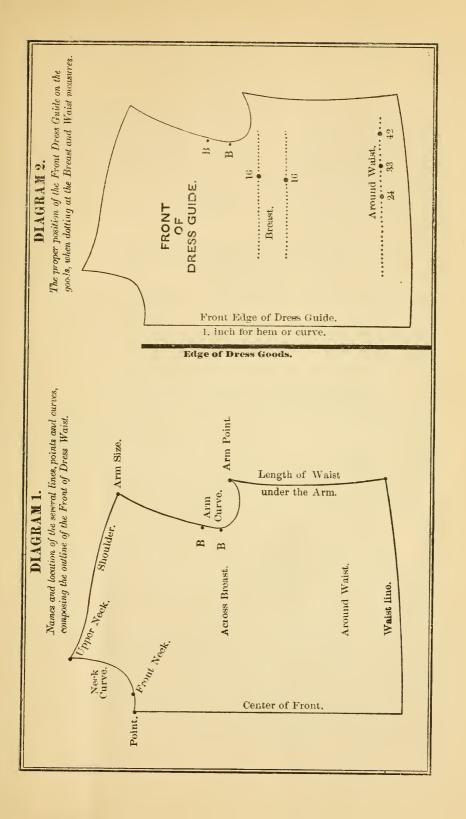
RULE 2—Keep the guide in the position just described, and proceed to make dots through the perforations marked 16·16· breast, and 24·33· and 42· around the waist, as represented by the large dots in diagram 2.

The figures 24 denote the actual size around the waist, and the two spaces occurring between 24 · 33 · and 42 ·, indicate the additional allowance required for the taking up of the two darts at the front of dress-waist—each space representing nine numbers, which is equivalent to the width of one dart.

# How to Shape the Front Arm-Curve.

[SEE DIAGRAM 4.]

RULE 3—This is done by placing the two dots B• B• (printed on the front arm-curve of the guide), exactly at, and just touching the two dots 16• 16• previously made on the goods for breast measure. While the guide remains in this position, draw a line around the edge of the arm-curve, from 15, arm-measure printed on the edge near the top, to the figures 15, near the arm-point.



# How to Draft Length-of-Waist.

[UNDER THE ARM.]

RULE 4—Place the arm-point of the guide, exactly at, and just touching the arm-point on the goods, with the length-of-waist edge of the guide placed close to, and on a line with the dot marked 24•, the measure around-the-waist as shown in diagram 4. Then draw a line along the edge of the guide, from the arm-point, down to the figure 8, denoting the length of waist.

The figures for length-of-waist sizes are printed down the length-of-waist edge of guide.

## The Proper Position of the Dress-Guide when Drafting the Waist-Line at Front.

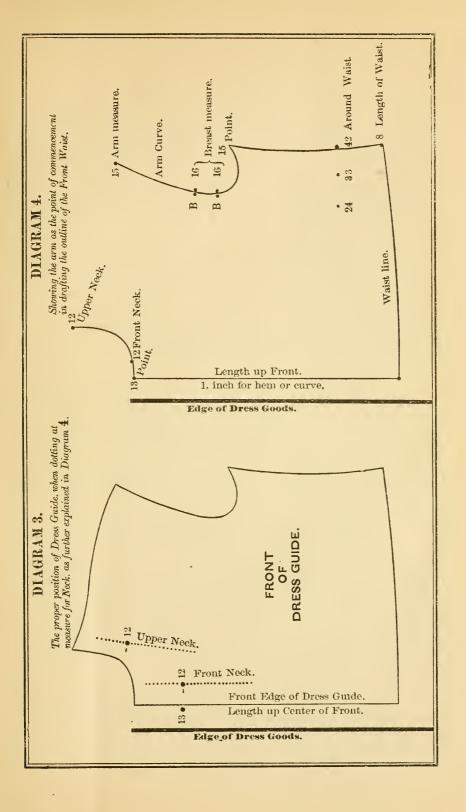
Rule 5—Place the front-edge of dress-guide close to and parallel with the hem-line, then move the guide downward, in the same parallel position, until the end of length-of-waist line appears just below, and on a line with the bottom-edge of dress guide; then draw a line across from the end of length-of-waist line, indicated by figure 8, to the hem at front. See diagram 4.

# How to Measure for Length Up Center of Front.

Rule 6—Place the front-edge of the guide close to and parallel with the hem-line of the goods, and the bottom-edge of guide resting on the waist-line; then make a dot on the hem-line at the figures indicating the length-up-front, viz., 13, printed on the front-edge of the guide. This measure is used for the purpose of determining the exact locality or point of the front-neck. It also regulates the slope or angle of the shoulder.

#### How to Draft the Front-Neck.

RULE 7—Place the front-guide in the position represented by diagram 3, viz.: With the measure 12, front neck, placed on a line with, and directly opposite the dot 13, previously made on the hem-line, to denote length up front; observing at the same time that the front-edge of guide is placed close to and parallel with the hem-line all the way down; then make dots at 12 front neck and 12 upper-neck. Now place the neck-curve of the guide directly underneath, and touching the dots just made for neck-measure; then draw a line from the hem at front to the upper-neck-dot on the goods, using for this purpose the neck curve of the guide. This shapes the front-neck as shown by diagram 4.



#### How to Draft the Front Shoulder.

RULE 8—Place the upper-neck-point of the guide directly at the upper neck point on the goods, at the same time having the shoulder-edge of guide resting on the top of arm-curve, at the figures 13, as indicated in diagram 4. While the guide remains in this position, draw a line on the goods from the upper-neck-point to the figure  $5\frac{1}{2}$ , the shoulder-length. See diagram 5.

The figures printed on the shoulder-edge of the guide, indicate the different shoulder-lengths.

# How to Re-Shape the Upper Part of Front Arm-Curve.

RULE 9—Place the lower part of the arm-curve of the guide to the same part of arm-curve on the goods, at the same time having the top of arm-curve resting at the end of the shoulder-line, as indicated by figure  $5\frac{1}{2}$ ; then draw a line from the end of shoulder-line to the lower breast-dot, as shown by diagram 5.

The arm curve, below the lower breast-dot, should not be changed.

# How to Find the Proper Height of Darts at Front.

RULE 10—Lay the dart rule across the outline of the front waist already drafted on the goods in the same position as shown by diagram 5, viz.: With the wide end of the rule placed close to and parallel with the hem-line, and the upper edge near the point placed directly underneath the lower part of arm-curve. While in this position, make dots at the "1st and 2d Darts for Ladies," printed near the lower edge of the dart-rule.

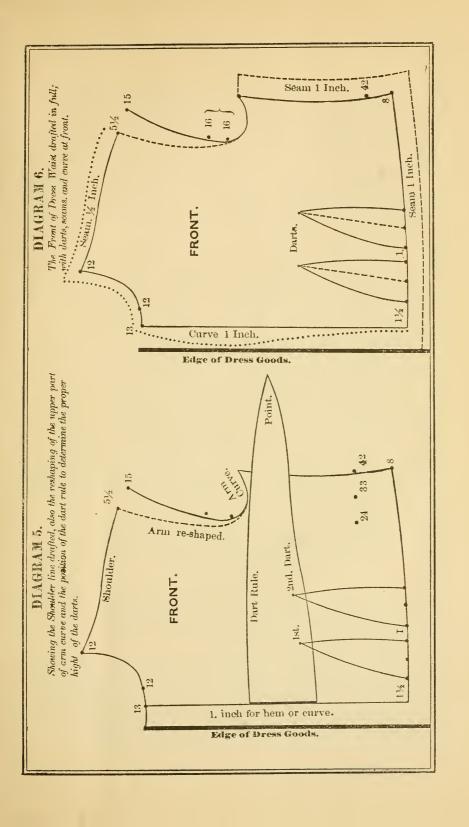
# To Measure Dart-Space at the Bottom of Waist.

RULE 11—Measure on the waist-line  $1\frac{1}{2}$  inches from the hemline, and make a dot. Now shape the first dart by placing the pointed end of dart-rule close to the dot made on the goods for the top of the first dart, at the same time having the side of dart-rule close to the  $1\frac{1}{2}$ -inch dot previously made on the waist-line, then draw a line down each side from the point to the waist-line.

The second dart is shaped in the same manner, leaving one inch space between each dart on the waist-line.

#### To Draft the Center Line of Darts.

RULE 12—Make a dot on the waist-line in the center of each dart; then draw a straight line from this dot to the point, as shown in diagram 6.



This line is designed as a guide in basting the goods down the center of the dart before sewing the sides together.

Allow for seams, as shown by diagram 6. The inner line is designed for basting, the outer for seams.

**Diagram 6**—Represents the front of dress-waist in its finished condition, showing the re-shaping of the arm-curve; also, the the dotted lines, denoting the center of darts, the space allowed for seams, and the proper shape of the curve at front.

This completes the Front of Dress Waist.

Diagram 7—Is designed to represent the back of the dress-waist in its general shape and outline; also, the location and names of the various points, curves and lines forming the basis of the measurements used in drafting the back of dress-waist.

**Diagram 8**—Is designed to show the proper position of the back dress guide on the goods in the first stage of drafting the back of dress-waist.

The heavy line running parallel with the center of back edge of guide, indicates the fold of dress-goods in position for drafting.

The perforations 12. 12. in the two dotted lines running crosswise of the diagram near the center, represent the average measurement across the back; and the dot 24. with the line running crosswise near the bottom of the diagram, represents the average measurement around the waist.

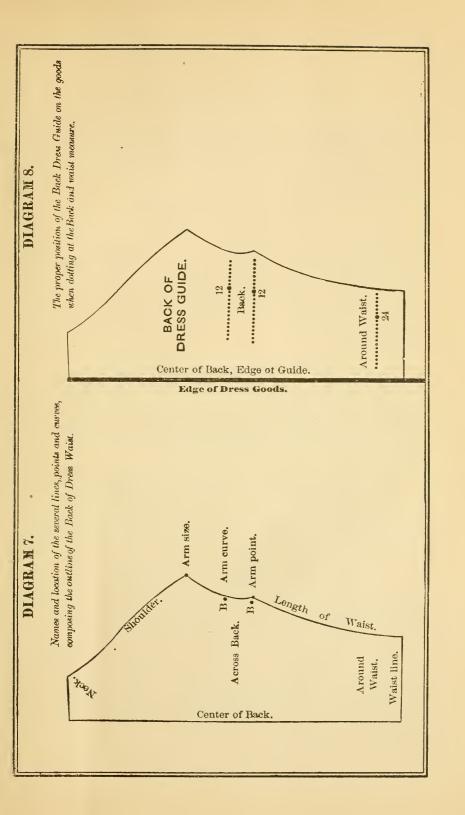
# How to Draft the Back of Dress-Waist.

Closed at the Center.

[SEE DIAGRAM 8.]

First bring the two selvages evenly together; then place the top of the goods at the left-hand side, and the fold-edge, or middle of the goods, directly in front.

RULE 13—The back-dress-guide should now be placed on the goods in the same position as shown by diagram 8, viz.: With the neck-point of the guide at the top, and the center-of-back edge of guide close to and parallel with the fold in front. Then make dots on the goods through the perforations on the guide at 12• 12• back-measure, and 24• for measure around the waist.



# How to Shape the Back Arm Curve.

[SEE DIAGRAM 10.]

RULE 14—This is done by placing the two dots B• B• printed on the arm-curve of the back-guide close to and on a line with the two dots made on the goods at 13• 13• back-measure. Then draw a line downward, from 15, arm-measure, to the arm-point, following the edge of the curve.

# How to Draft Length of Waist.

[UNDER THE ARM.]

Rule 15—Place the arm-point of the back-guide exactly at and touching the arm-point on the goods; observing at the same time that the length-of-waist edge of guide is placed close to and on a line with the dot 24 around-the-waist measure, as shown in diagram 10; then draw a line along the edge of the guide, downward, from the arm-point to the figure 8, which denotes length of waist.

#### How to Draft the Bottom of Waist-Line.

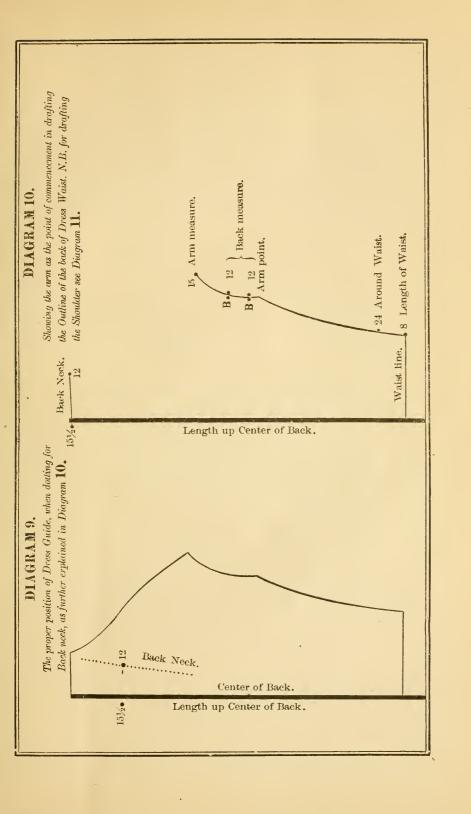
RULE 16—Place the center-of-back edge of guide close to and parallel with the edge or fold of goods, and the bottom-edge of the guide resting directly on the end of length-of-waist line; then draw a line straight across from the figure 8 to the center of back. See diagram 10.

# How to Measure on the Goods for Length Up Center-of-Back.

RULE 17—Place the center-of-back edge of the guide close to and parallel with the fold of goods, and the bottom-edge of the guide resting on the waist-line; then dot on the edge of goods at the figures  $15\frac{1}{2}$ , printed on the guide for length up center of back.

#### How to Dot at the Measure for the Back-Neck.

RULE 18—Place the back-guide in the position represented by diagram 9, viz.: With the figure 12, back-neck-measure, placed on a line with and directly opposite the dot  $15\frac{1}{2}$ , previously made on the edge of goods, for length up center of back, observing at the same time that the center-of-back edge of guide is on a line with the fold of goods all the way down; then make a dot on the goods at 12, back-neck. Now slip the guide downward until the neck-edge of the guide is directly underneath and on a line with the dots just made; then draw a line from the figure  $15\frac{1}{2}$  on the edge to 12, as shown in diagram 10.



### How to Draft the Back-Shoulder-Line.

# [SEE DIAGRAM 11.]

Rule 19—Place the back-neck-point of the guide exactly at and touching the back-neck-dot on the goods, at the same time having the shoulder-edge of the guide near the lower end resting on the top of the arm-curve, at figure 15; and, while the guide is in this position, draw a line from the back-neck-point to the figure  $5\frac{1}{2}$ , printed on the shoulder of the guide, denoting the length.

# How to Re-Shape the Back Arm-Curve.

# [SEE DIAGRAM 11.]

RULE 20—Place the arm-point of the guide exactly at and touching the arm-point on the goods, at the same time having the upper part of arm-curve placed at the end of the shoulder-line indicated in diagram 11 by figure  $5\frac{1}{2}$ , then draw a line from the end of shoulder to the arm-point as shown in diagram 11.

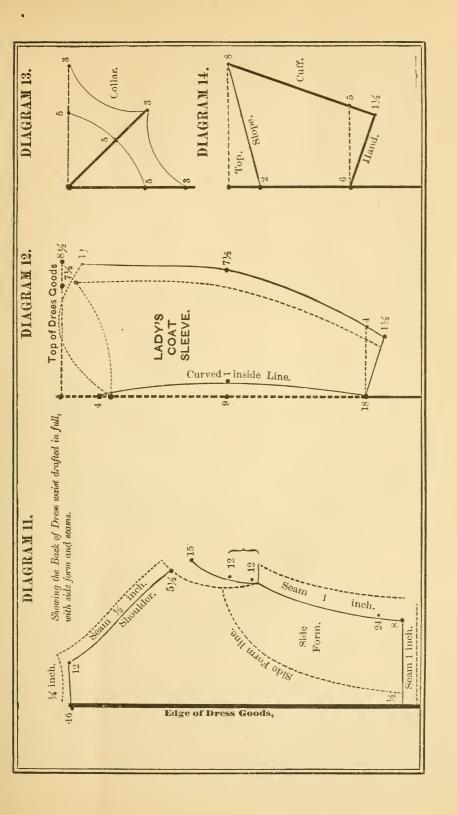
## How to Shape the Side-Form of the Back-Waist.

Rule 21—Place the side-form-rule of the guide in the same position on the goods as shown in diagram 11, viz.: First make a dot at the waist-line on the goods half-an-inch from the center of back; also, make a dot on the arm-curve, a little below half-way; then place the upper edge of the side-form-rule close to these dots, and draw a line from the arm-curve to the waist using the upper or most rounded edge for this purpose.

The shape of the curve can be varied, more or less, as the difference in forms and change in fashion may require.

Diagram 11—This represents the back of dress-waist in its finished condition, showing the re-shaping of the arm-curve, the shape and position of the side-form, lines for seams, etc.

This completes the Back of Dress-Waist.



# LESSON 2.

# Front of Lady's Basque.

[SEE DIAGRAM 15.]

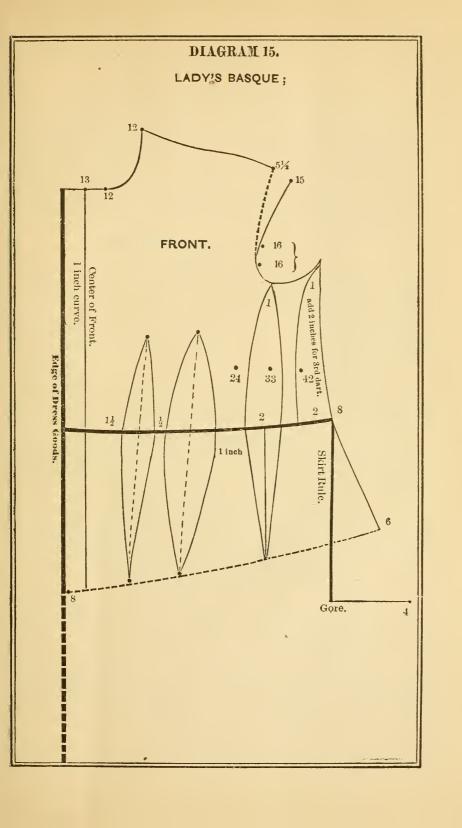
Rule 22—The front of this garment is drafted according to rules previously given under diagrams 2, 3, 4 and 5, except when adding for the two front darts or biases, allow 2 inches for underarm bias. See diagram 15.

To draft the skirt of basque—Place the skirt-rule point-A at the bottom of waist under the arm (see figure 8), and the straightedge of rule placed parallel with the edge of goods; make a dot at perforation 3 on the rule running cross-wise and marked for gores.

To draft the skirt-line—Slip the lower edge of rule so that the straight-edge will touch the dot 3; draw a line from the bottom of waist down to figure 6, marked on the straight-edge of rule; next measure down the edge of goods at the front, 8 inches, and draw a line from 6 at the side to 8; this line forms the skirt of basque, which may be shaped to suit any style.

The outline of the darts or biasses should now be extended to the bottom of the skirt in the manner indicated by diagram.

Seams are to be allowed, and a hem or curve at front to suit.



# How to Find the Slope of the Gore.

[AT THE SIDE.]

Rule 23—This is done by placing the skirt-rule on the goods in the same position as shown in the diagram, viz.: With the A-point of the rule resting at the end of length-of-waist-line, indicated by the dot at figure 8, and the straight-edge of the rule placed exactly parallel with the edge of goods; then make a dot at the figure 3 for gore at the side, printed across the center of skirt-rule "slope of gores".

# How to Draft the Line for Length of Skirt.

[AT THE SIDE.]

Rule 24—Keep the A-point of the skirt-rule in the position last described, viz.: At the terminus of the length-of-waist-line, at the same time having the straight-edge of the rule moved close to and on a line with the 4-inch dot made for gore; then draw a line from the A-point down to the 6 inch dot, shown by diagram, denoting the length of the skirt at the side.

In drafting the gores, it is very important that the straight-edge of the skirt-rule be placed exactly parallel or even with the edge of goods all the way down, otherwise the true slope can not be obtained.

# For Length of Skirt, at the Front.

Rule 25—Measure down the edge of goods at the front, 8 inches from the waist line, and make a dot to denote the length of skirt.

#### How to Curve the Bottom of Skirt.

RULE 26—Place the curved-edge of the skirt-rule up to and on a line with the dots made on the goods for length, and draw a line from dot 6, at the side, to dot 8 on the edge of goods at front.

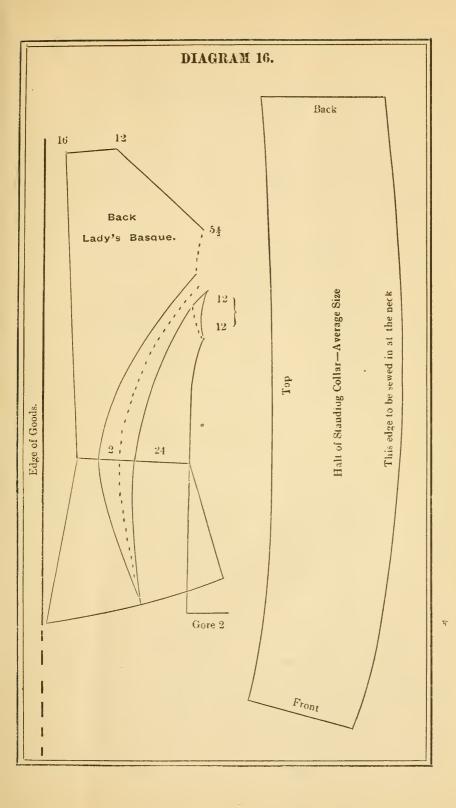
# - How to Lengthen or Extend the Darts.

[BELOW THE WAIST-LINE.]

RULE 27—Place the straight-edge of skirt-rule up to and parallel with the center-line of the darts; then continue this line downward, by the same slope to the bottom of the skirt.

The outline of the darts should now be extended below the waist to the bottom of the skirt, by drawing a straight line from the terminus of each dart, at the waist-curve, to the terminus of the center-line, at the bottom of the skirt. Both sides of the darts should be drafted in the same manner.

This completes the Front of Basque.



# Back of Lady's Basque.

[SEE DIAGRAM 16.]

The waist of this garment is drafted according to rules previously given under diagrams 8, 9, 10 and 11, except to place the guide away from the edge of goods 2 inches. This is to allow for spring and curve at the center of back. If a plait is desired below the waist, more may be added.

When dotting for waist-measure 24 add beyond this 2 inches, and draw the length of waist-line so that the pattern, when completed, will be 2 inches wider on the waist-line. See diagram 16.

Slope the center of back-waist as indicated by diagram. Draw the first line for side-form  $1\frac{1}{2}$  inches from the center of back on waist-line, and 2 inches from the top of arm-curve. The second line is drawn 2 inches away from the first, just as much as was added when drawing the pattern, and 1 inch below the first on the arm-curve. The gores are drafted the same as for front, using the figures indicated on diagram. The dotted line indicates the line for cutting, the others for sewing. Allow for seams.

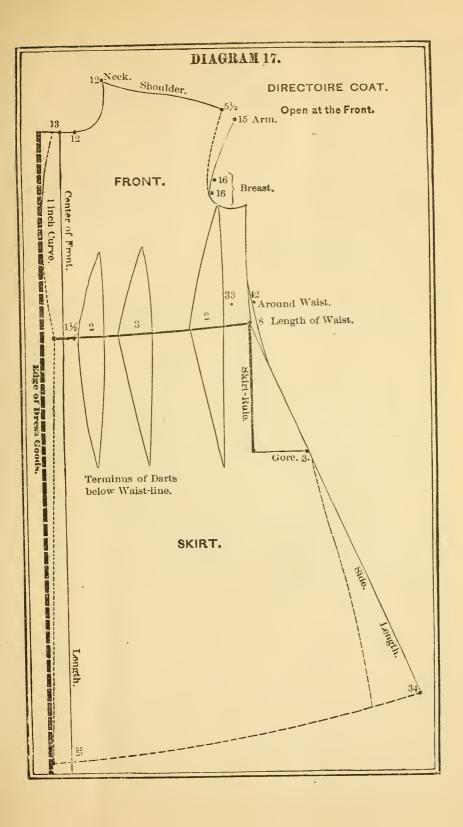
# How to Draft the Skirt.

[AT THE BACK.]

Rule 28—This is done by placing the A-point of the skirt-rule reversed at the center of the back-waist-line. See diagram 19. Dot at perforation 1 on the line for gores. Slip the rule so that dot 1 will be on a line with its straight-edge and draw to figure 8. The next gore is made by placing the skirt-rule right side up at the lower end of side-form-line, and the straight edge parallel with the fold of goods. Dot at perforation  $1\frac{1}{2}$  for gore. Slip the rule even with the dot, draw a line to figure 7, with the curved edge of rule draw a line from 7 to 8, this being the skirt-line. The side-form-line is drawn with the straight-edge of rule from figure 2 downward 7 inches. The seam under the arm is drawn in like manner, except dot at figure 2 instead of  $1\frac{1}{2}$ . Draw the skirt-line 6 inches, and with the curved edge of rule draw a line from 6 to 7.

If plaits are desired draft according to diagram 17.

This completes the Back of Basque.



# Lady's Polonaise or Directoire Coat.

[SEE DIAGRAM 17].

### How to Draft the Front.

Rule 29—Place the front-guide on the goods in the same position as shown in diagram, and proceed to draft the waist according to the rules previously given for Front of Lady's Basque.

The skirt of polonaise is drafted by the rule previously given for Lady's Sacque-Wrapper, and the darts by the rule for Lady's Basque.

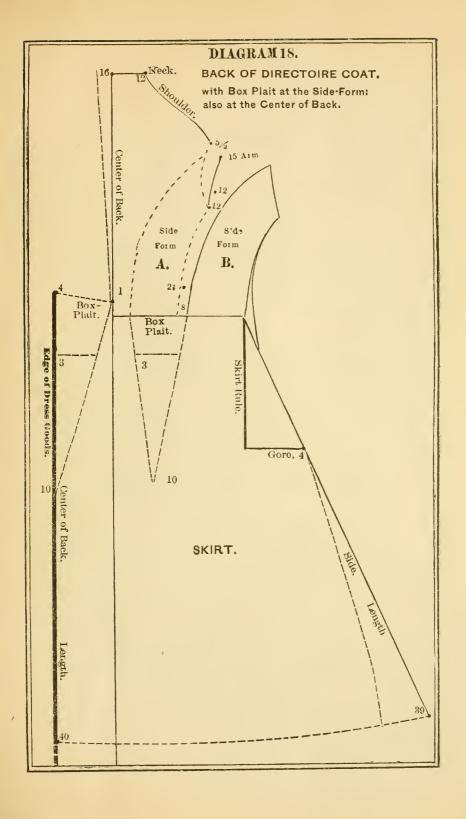
# Directoire Coat or Polonaise, With Box-Plait.

[SEE DIAGRAM 18.]

#### How to Draft the Back.

RULE 30—Place the back-guide 4 inches from the edge of goods, to allow for the plait at the center of back; then draft the waist in the same manner as described for Back of Basque, see diagram 16, by separating the side-form; making the gore at the side; shaping the box-plait at the back, etc., applying the measures printed on the diagram for this purpose.

The side-form line may terminate at the shoulder instead of the arm-curve, if desired. The length of skirt, at the side next back, is 39 inches, and the length of skirt, at the side next front, is 34 inches, difference in the two lengths being 5 inches. This difference should be taken up in three plaits, near the upper part of the skirt, at the side next back.



# LESSON 3.

# Miss' Basque, Closed at the Front.

[SEE DIAGRAM 19.]

### How to Draft the Front.

RULE 31—Place the front-guide in the same position as shown in diagram 19, viz.: With the front-edge slipped over the fold of goods 1 inch; then draft in the usual manner by the rule given for waist closed at the front, remembering to add only one dart to the waist-measure.

The dart should be extended below the waist-line to the bottom of skirt, the same as Lady's Basque. In all other respects, the front of this garment is drafted by the rule for Front of Lady's Basque.

Remember that, when dotting for the measures of the neck, the edge of front-guide should be slipped over the fold of the goods in the same manner as when first commencing; otherwise, the dress would be too large at the front-neck.

# Miss' Basque, Open at the Back.

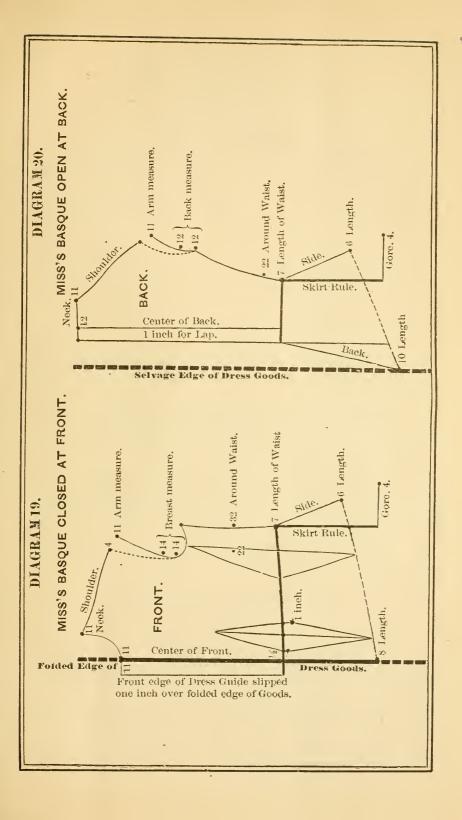
[SEE DIAGRAM 20.]

### How to Draft the Back.

Rule 32—Before commencing to draft this waist, it is necessary to draw a line parallel with and  $1\frac{1}{2}$  inches distance from the selvage-edge [of goods, making it the entire length of the back. This line is to allow for the gore of the skirt at the center of back.

A second line should now be made for lap, viz.: 2 inches distant from the line first made. Now place the center-of-back edge of guide close to this line, and draft the waist in the same manner as for waist open at the back, applying the measures printed on the diagram.

This style of basque can be made with side-form at the back, and gored-seam extending from the same, by applying the rules previously given for this purpose.



# Lady's Loose Sacque-Cloak.

Double-Breasted.

[SEE DIAGRAM 21.]

### How to Draft the Front.

Rule 33—Place the front guide on the goods in the same position as shown in diagram, viz.:  $2\frac{1}{2}$  inches from the selvage-edge, to allow sufficient goods for the shaping of the double-breasted collar; then draw a line along the front-edge of the guide, its entire length. Now proceed to draft in the same manner as for the front of tight-waist.

The skirt at front, for sacque-cloak, is drafted by the same rule as the front-skirt of Lady's Polonaise, by applying the measure printed on the diagram for the gore and length.

The spaces indicated by the figures 24 · 33 · and 42 · denote fullness added to the measure around the waist.

The sloping line, commencing 6 inches on the edge of goods below the front-neck, and terminating at the 1-inch dot on the shoulder-line below the upper-neck, denotes the line of fold for collar.

The upper portion of the neck, commencing at the intersection of the lower part of the neck-curve with the dotted sloping line, extending to the 1-inch dot at the shoulder, should be cut away for the sewing on of the rolling collar.

The buttonholes, indicated by the large dots near the selvageedge, and running lengthwise of the front, are three inches apart, and the buttons are placed five inches across from the buttonholes, and directly opposite.

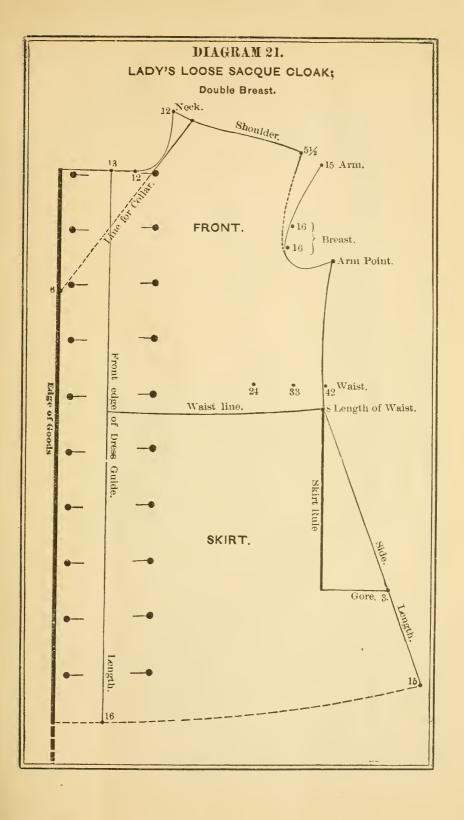
For the shaping of the collar, see diagram for Gent's Dressing Gown.

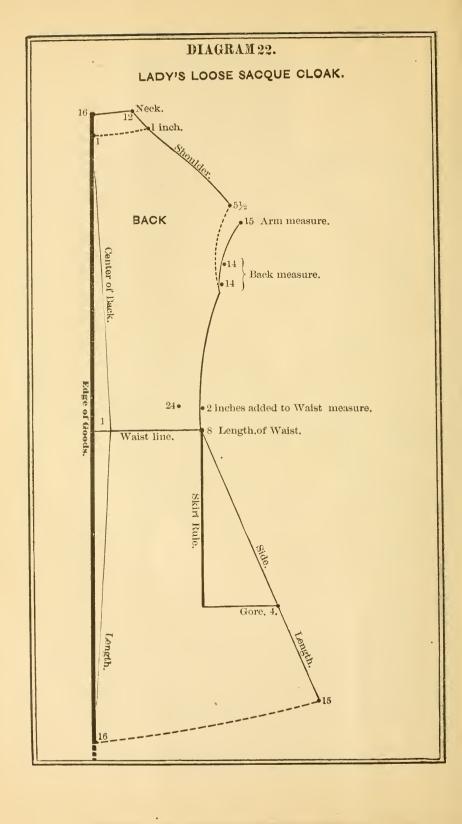
# Lady's Loose Sacque-Cloak.

[SEE DIAGRAM 22.]

#### How to Draft the Back.

RULE 34—Place the back-guide on the goods in the position shown by diagram, and draft in the same manner as for back of tight-waist, except at the measure across the back, which should be made 1 inch looser than for a tight-waist. Also, at the measure around-the-waist, 2 inches should be added for fullness; remembering to measure by the inches on the dart-rule.





The skirt of this garment is drafted by the same rule as Lady's Polonaise, applying the measures given in the diagram.

The upper part of the back indicated by the 1-inch dotted line below the neck, should be cut off to fit the neck at the front, and for the sewing on of the collar.

Front and under arm darts may be added when desired.

# Lady's Circular.

[SEE DIAGRAM 23.]

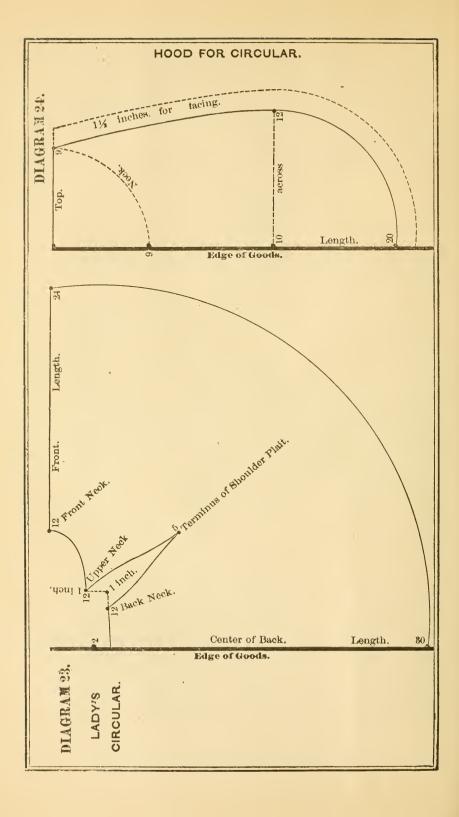
The measures used in drafting this garment consist of—first, the neck; second, across the back; third, length down the center of back, and, fourth, length down the center of front.

#### How to Draft the Back of Circular.

RULE 35—Place the back-guide in the position indicated in the diagram, viz.: With the center-of-back edge of guide placed directly at the fold-edge of goods, at the same time having the neck-edge slipped down 5 inches below the top; then dot at 12, back-neck; also, at 13, for measure across the back, dotting on the upper line of measures for this purpose. Now change the position of the guide, and draw the line for back-neck. Next, place the guide in the following position, viz.: With its upper neck-point resting at the neck-point on the goods, at the same time having the shoulder-edge resting on the dot made for back-measure, viz.: 13. Then draw a line on the edge of the shoulder from the neck-dot 12 to the figure 5, for length, printed on the shoulder-edge. Next, measure 1 inch straight across from the back-neck, and make a dot; and from this point again measure 1 inch straight up, and dot.

#### How to Draft the Front of Circular.

RULE 36—Turn the front-guide wrong side up, and place it in such position on the goods that the upper-neck measure, 12, will be directly on and over the 1-inch dot last made, at the same time keeping the front-edge of the guide on a parallel line with the edge of the goods; then dot at 12, front-neck, and 12, upper-neck. The front-guide should be changed into its proper position, and the neck-curve-edge of the guide placed directly up to and under the dots last made for neck at front. A line should now be drawn from 12, upper neck, to 12, front neck, as indicated in diagram.



The plait on the shoulder is shaped by drawing a line on the shoulder-edge of the back-guide from the upper-neck dot 12, to the 5-inch dot on the terminus of the shoulder-plait.

The length of the circular and the curve at the bottom are obtained in the following manner, viz.: Place the figure-1-end of the tape-line on the fold-edge of the goods, 2 inches above the line of back-neck fastening it by pin or otherwise to the table; then wrap the tape-line at the distance of 30 inches from the upper end around a pencil, and while fully stretched, draw a line around from the fold-edge to the front. This gives the curve for the bottom, and the proper length.

#### Hood for Circular.

[SEE DIAGRAM 24.]

#### How to Measure for Hood of Circular.

First, measure with tape-line, beginning at the nape of the neek, passing over the crown of the head to the center of the forehead; second, measure from the left side of the neck, below the car, to the opposite side at the same point.

#### How to Draft the Neck-Curve of Circular.

RULE 37—First, measure down the selvage-edge of goods 9 inches, and make a dot; also, measure across the top of the goods 9 inches; then draft the neck-curve with the tape-line stretched in the manner described for drafting curve at the bottom of circular, using 9 inches instead of 30.

For length of hood make a dot 20 inches below the 9-inch dot, measuring on the edge of goods; then make a dot 12 inches above the 20-inch dot last made.

The curve for the bottom of the hood is shaped by the tape-line in the manner previously described, placing the 1-inch end of tape-line at the 12-inch dot last made and drawing a curve around the bottom, with the tape-line stretched 12 inches, as shown in diagram 49.

The upper side of the hood, extending from the 12-inch dot to the 9-inch dot at the top, is shaped by the side-form rule; also, the dotted outside line, which is designed for facing.

## LESSON 4.

## Gent's Sacque-Yoke Shirt.

[SEE DIAGRAM 25.]

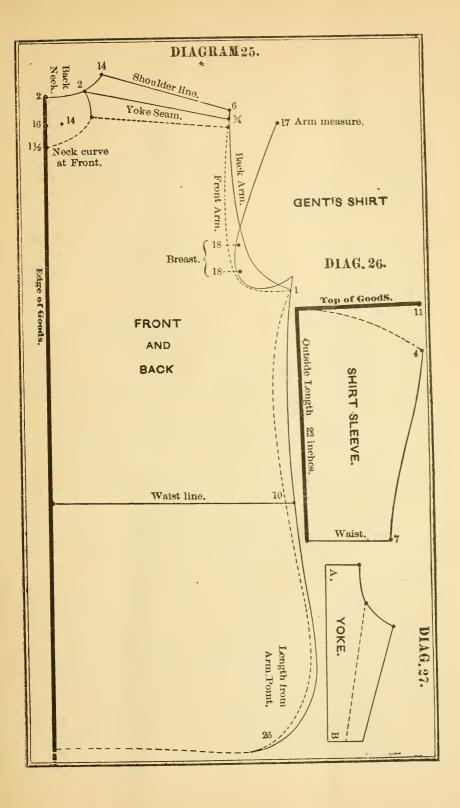
#### How to Draft the Back.

Rule 38—For this garment draft by the following average measures, viz.: First, Across the breast 18 inches; Second, Omit the measure around the waist, and draw the line for length of waist straight down from the arm-point the required length; Third, Around the arm, 16; Fourth, Length of waist, 10 inches; Fifth, Length up center of front, 16; Sixth, Around the neck, 14; Seventh, Length of shoulder, 6 inches; Eighth, Length of skirt from arm-point to the bottom, 25 inches.

The outline of this garment is drafted by the rules previously given for dress-waist, and applying the above measures for this purpose.

#### How to Shape the Back-Neck.

Rule 39—The waist of this garment being drafted, then proceed by making a dot on the edge of goods 2 inches above the 16-inch dot. The back neck is now shaped by the neck-curve of the the guide, drawing a line with the guide in a reversed position from the 2-inch dot on the edge to the 14-inch dot of upper-neck. This being done, make another dot 2 inches from the edge of the goods on the curve of back neck. Then make a dot three-fourths of an inch below the 6-inch dot at the terminus of the shoulder. A line should now be drawn across from the 2-inch dot on the curve of neck to the \(\frac{3}{4}\)-inch dot, below the end of shoulder Next, trim out the neck by cutting exactly on the line of the neck-curve and shoulder to \(\frac{1}{2}\)-inch dot below the top of arm-curve.



The goods should now be folded over on the line drawn from the 2-inch dot to the 3-inch dot, so that the shoulder-edge of the yoke will meet at the dotted line indicated in the diagram as the yoke-seam.

The back of arm-size is shaped with the side-form-rule, by drawing a line on the under-edge from the shoulder to the 1-inch dot below the arm-point.

#### How to Shape the Front of Shirt.

RULE 40—First shape the front neck. This is done by making a dot  $1\frac{1}{2}$  inches below the 16-inch dot, indicating the length up front, and then drawing the curve designated in diagram by the dotted line.

The curve for front-neck is shaped, after the yoke is folded over, by the neck-curve of the guide being placed in such position as to unite with and form a continuous line with the curve of the yoke at back-neck, as shown by diagram.

The dotted line in the diagram located at and forming the yoke-seam, is the terminus of the upper part of the front of shirt where it unites with the yoke.

The reshaping of the front-arm-size is done by cutting off one inch at the arm-point first drafted.

The curved dotted line, denoting length of waist, is shaped by marking on the curved-edge of the dart-rule, placing it in such position as to produce the shape desired.

The curve and length of the shirt at the side are obtained by the skirt-rule, the corners being rounded by the side-form-rule.

In drawing the arm-size of shirt it is necessary to draw the line from 16 arm-measure to 13, near the arm-point.

Diagram 27—This represents a separate yoke for shirt, and is drafted in the same manner as the sacque-yoke shirt, with the following exceptions, viz.: The shoulder part of the back being extended 3 inches beyond the arm-size of the front yoke, and then gathered into a separate yoke. The front of shirt, for separate yoke, is drafted in the same manner as the front of sacque-yoke shirt.

The letters A. B. in the diagram indicate the yoke seam at back and the dotted line, commencing at the neck-curve, denotes the fold.

## Dress-Skirt, Without Train.

[SEE DIAGRAMS 28, 29 AND 30.]

#### How to Draft the Front-Width.

RULE 40—First, fold the goods double; then measure across the top 5 inches for waist-line, and make a dot. The A-point of the skirt-rule should now be placed at this dot, and the straightedge of the rule parallel with the fold of goods, dotting at figure 2 for gore, next front; then draft the line for length at the side, and at the center of front, in the usual manner.

The 1-inch dot on the fold-edge of goods, below the waist-line, denotes the curving of the waist at front.

#### How to Draft the Side and Back-Width.

Rule 42—Place the goods in the position indicated by diagram; then measure across the top 8 inches, for waist-line, and make a dot. Next, place the skirt-rule in the position previously described for forming the gore at the side, and draft the remainder of the skirt in the usual manner, being careful to use the figures indicating the lengths and gores, printed on the diagram.

Diagram 30 represents one plain width, folded at the center of back, and is drafted by the figures indicating the measures, by the rule previously given.

This skirt, when drafted, will measure 3 yards in width at the bottom.

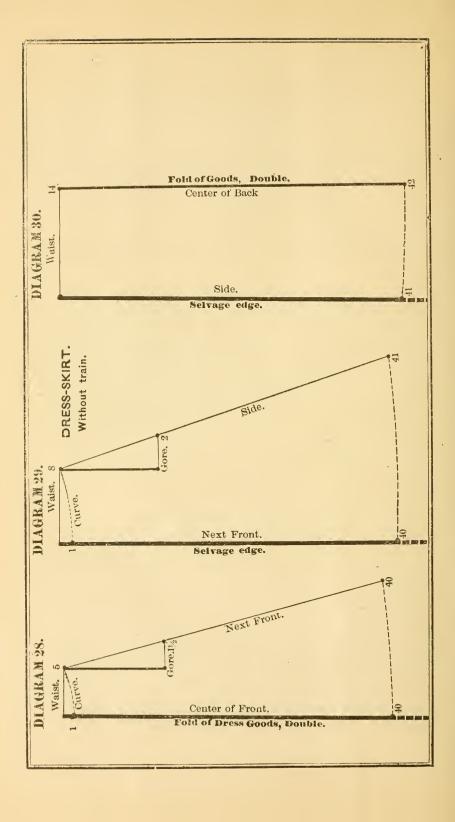
## Dress-Skirt, With Train.

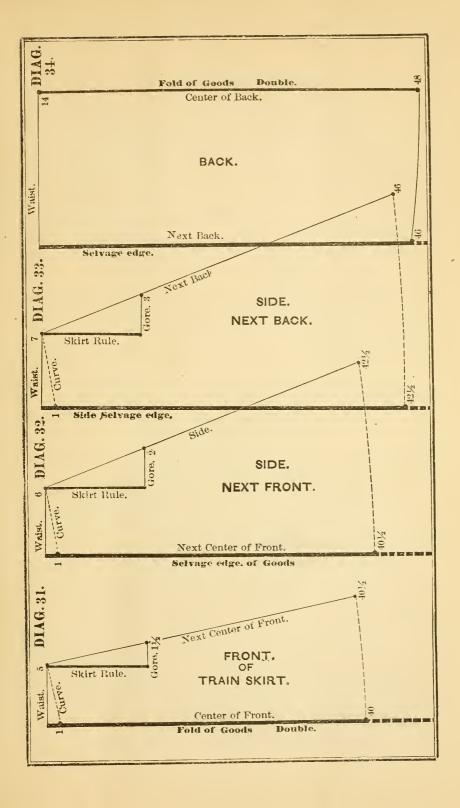
[SEE DIAGRAMS 31, 32, 33 AND 34.]

RULE 43—This skirt is drafted by the same rule as given for skirt without train, with the exception of its having two gores on each side instead of one; being, also, longer at the seams and wider at the bottom.

In all other respects it is drafted in the usual manner, by applying the figures on the diagrams indicating the distances and lengths, and the slope of the gores.

This skirt, when drafted by these measures, will be three yards and three-quarters wide at the bottom, with train eight inches in length.





## Lady's Sacque-Chemise.

[SEE DIAGRAM 35.]

#### How to Draft the Front and Back Together.

RULE 44—First, fold the goods double, and again cross-wise; then proceed to mark off the following distances, viz.: First, Measure down the edge of the fold 12 inches, and make a dot; Second, From this dot draw a line straight across 9 inches for bottom of waist; Third, Measure from the fold-edge across the top of the goods 12 inches, and dot; Fourth, From this dot draw a straight line down 4 inches for arm-size; Fifth, From the 4-inch dot at the end of the arm-size-line draw a line for length of waist to the 9-inch dot at the waist-line-terminus.

The curves of the front and back-neck are drafted by the dots and figures printed on the diagram, and shaped by the curve of the side-form-rule; the upper neck-dot being 3 inches from the fold-cdge of the center.

The skirt is drafted in the usual manner, using the measures indicating the slope of the gore and the lengths of the seams.

## Lady's Yoke-Chemise.

[SEE DIAGRAM 36.]

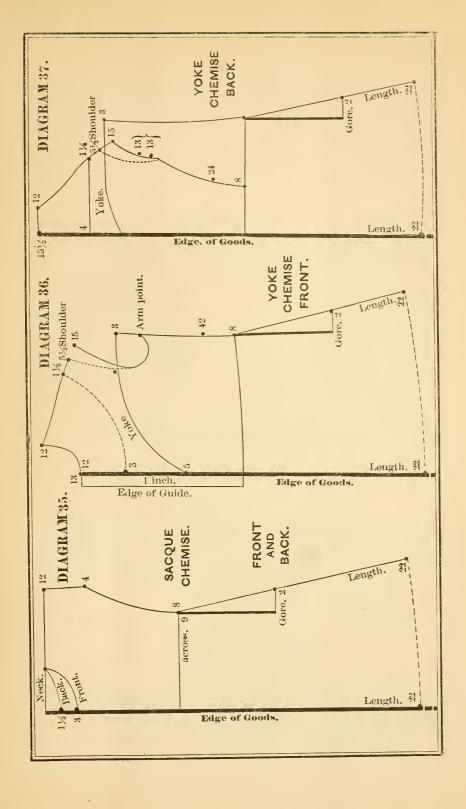
#### How to Draft the Front.

RULE 45—Place the front-guide on the goods in the position shown by diagram, viz.: With the front edge slipped 1 inch over the fold of the goods at the center-of-front; then proceed to draft in the same manner as for tight-waist.

The dotted curved line at the upper part of the waist indicates the part to be cut off, and is shaped by the side-form-rule being placed at the distance of 3 or 4 inches below the neck, and  $1\frac{1}{2}$  inches above the end of the shoulder-line.

The line under the yoke is also shaped by the side-form-rule being placed at the figures indicated, viz.: 4 or 5 inches above the waist-line, and 3 inches below the shoulder on the arm-curve, extending the line 3 inches beyond, for fullness, in the manner previously described for Yoke-Waists.

This fullness is gathered into the yoke.



The remainder of the front is drafted as shown in the diagram, by making the length-of-waist line straight down from the 3-inch dot above the arm-point to the waist-line, and shaping the skirt in the manner previously described.

## Lady's Yoke-Chemise.

[SEE DIAGRAM 37.]

How to Draft the Back.

Rule 46—Place the back-guide on the selvage-edge of goods, and draft the back in the same manner as described for the back of tight-waist, using the measures given in the diagram.

The figure 5, printed on the edge of goods below the Neck, denotes distance from the neck, and the figure 2 denotes distance from the 5-inch dot located on the edge above. The  $1\frac{1}{2}$ -inch dot on the shoulder denotes distance above the top of arm-size, and the 3-inch dot beyond the center of arm-curve denotes fullness.

The forming of the yoke is done by placing the side-form rule at points indicated by the figures, and drawing a line according to the shape desired.

The line for length of waist is made straight down to the waist-line.

The skirt is drafted in the usual manner.

## Corset Cover.

[SEE DIAGRAM 38.] How to Draft the Front.

RULE 47—This garment is drafted by the same rule as previously given for Miss' Basque, with the following exception, viz.: It being open at the front and low at the neek.

The measures for this waist should be taken tighter than usual, as it is designed to be worn under the dress.

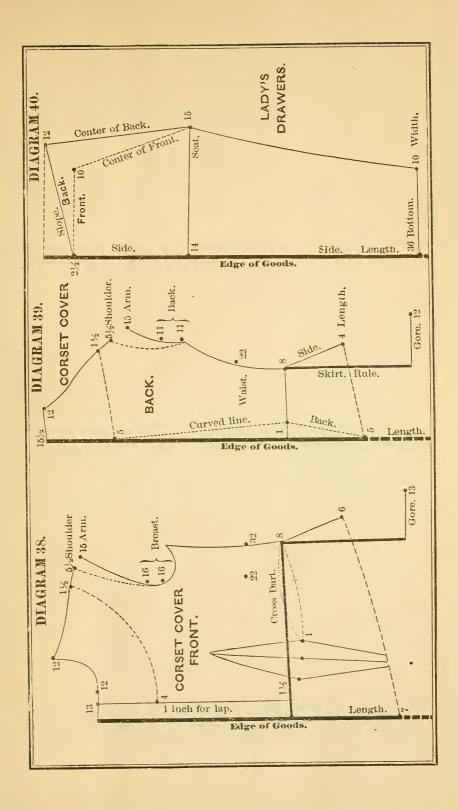
The low neck is drafted by the measures and shaped as shown by the diagram.

#### How to Draft the Back.

[SEE DIAGRAM 39.]

Rule 48—The back of the corset-cover is drafted by the rule for Miss' Basque, excepting that there is a seam down the center of back, indicated by the curved line.

The line for low-neck is formed in the usual manner.



## Lady's Drawers.

[SEE DIAGRAM 40.]

#### How to Draft the Back.

RULE 49—For this garment take the following measures: *First*, Around the waist, 24 inches; *Second*, From the bottom of the waist down the side, 36 inches; *Third*, Around the bottom of the leg, 20 inches.

RULE 50—Place the fold-edge of goods in the position indicated by the diagram; then proceed in the following manner, viz.: First, Measure down the fold-edge of goods 2½ inches from the top and make a dot, this gives the slope at the waist: Second. From this 2½-inch dot measure down the fold-edge 36 inches, and dot, this gives the length at the side; Third, From the 36inch dot measure 10 inches straight across, this gives half the width of the leg of the drawers at the bottom; Fourth, Measure from the 2½-inch dot first made, sloping upward to the top of the goods, 12 inches, and dot; this gives half the width of the measure around the waist; Fifth, Measure from the  $2\frac{1}{2}$ -inch dot downward, on the fold-edge, 14 inches, and dot; this distance is determined by adding 2 inches to one-third of the length, and forms the basis for the line across to the seat; Sixth, From the 14inch dot measure straight across 15 inches, and dot; this gives the line of the seat, and should be 3 inches wider than at the waist.

The outline of the drawers is obtained as follows: First, Draw a line from the  $2\frac{1}{2}$ -inch dot to the 12-inch dot at the front; Second, Draw a line from the 12-inch dot to the 15-inch dot at the seat; Third, Draw a line from the 15-inch dot downward to the 10-inch dot, curving it slightly with the curved edge of skirt-rule. This forms the line for inside seam of the leg of the drawers.

This completes the garment, when the front and back are drafted alike.

The front of the drawers at the top may be drafted narrower and shorter, if preferred, by shaping according to the under dotted line, marked front, 10 inches. See diagram.

## LESSON 5.

## Ladies' Newmarket with Pelerine Sleeve.

[SEE DIAGRAM 41.]

In drafting this garment, 2 inches should be allowed at front, if double-breasted is preferred; two darts are allowed, as a rule, for all outside garments. Buttons and buttonholes may be placed as desired; all double-breasted garments should be finished at the neck with a coat-collar, which should terminate  $1\frac{1}{2}$  inches from the end on each side, forming a V shape when finished. The collar should have an inner lining of canvas, and be folded over by dotted lines, and is drafted by the side-form rule. See diagram.

The sleeve forms a cape at front, and at back is sewed on down the side-form line as indicated. .

There being but two darts taken up, the front may be curved, as indicated in diagram. The back of Ladies' Newmarket may be drafted by diagram 46, back of Ladies' Wrap, with full skirt plaited and sewed on to a band underneath, or may be cut whole as indicated in diagram 18, for Ladies' Directoire Coat.

#### Rule for Drafting Pelerine Sleeve.

[SEE DIAGRAM 42.]

This pattern should be drawn on medium-sized pattern paper. Draft front waist by the following measures:

INCHES.

15 —Breast.

24 — Waist.

15 —Arm.

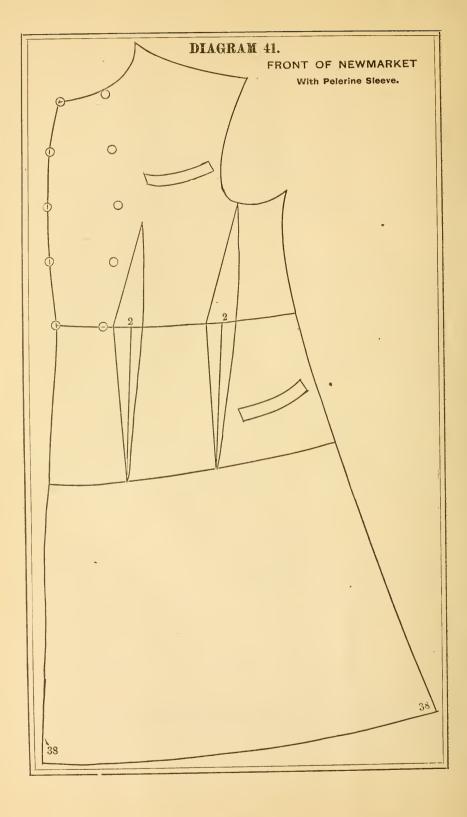
8 —Length of Waist.

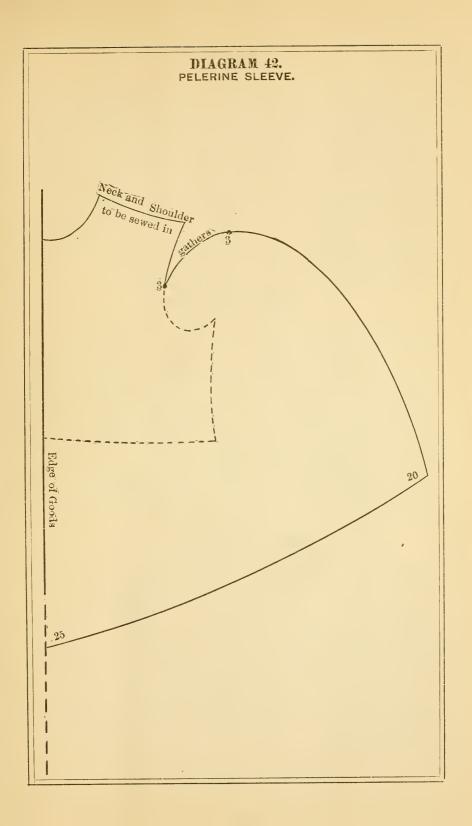
14 —Center of Front.

 $13\frac{1}{2}$ —Neck.

6 —Shoulder.

Measure from top of arm-size at the shoulder-point  $3\frac{1}{2}$  inches, straight across and make a dot; next measure down the arm from the top,  $3\frac{1}{2}$  inches, and dot.





Take size-form rule reversed, with the extreme point of the upper end placed on the  $3\frac{1}{2}$ -inch dot made on the arm-size, and the rounding-part of the rule touching the first dot made; draw around from dot made on the arm-size the entire length of the side-form rule, continuing in a straight line 8 inches more and dot. 2—Measure downward from lower neck-point 25 inches and dot. Draw a line with the straight edge of skirt-rule from the 25-inch dot, to dot made at end of side-form line. This forms lower part of sleeve, and may be shaped to suit any style. The  $3\frac{1}{2}$ -inch dot at the upper part of the pattern should, when basted, touch the end of the shoulder-seam, and be gathered slightly to fit. This style of sleeve may be placed in any kind of wrap, short or long.

## Front of Tea-Gown.

[SEE DIAGRAM 43.]

Draft a plain waist; allowing for 2 darts, although 3 or 4 may be used if desired; the skirt also in the usual manner.

The line marked "folded over to form revers," represents the outside goods, after being cut and basted all ready for fitting, folded over to be faced and finished with blind stitching or cord; the lining being exposed, may be covered with a gathered vest of contrasting color, or laid on plain, and finished in the ordinary manner with buttons and buttonholes.

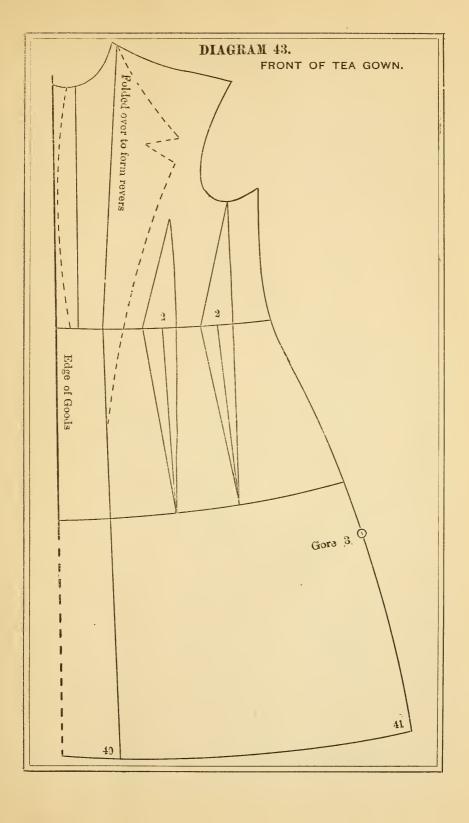
The irregular dotted line indicates the shape of revers, which may be changed if desired. The back of this garment can be cut by any rule or mode in the book to suit the taste; the front may be curved to suit the size of bust.

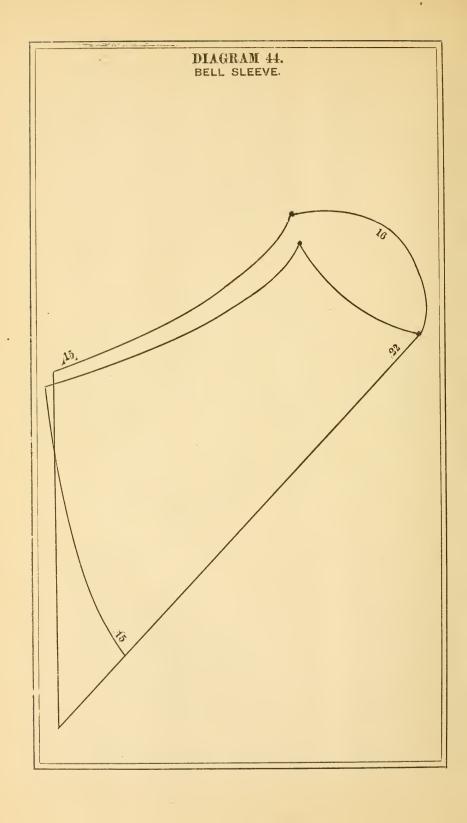
## Back of Tea-Gown.

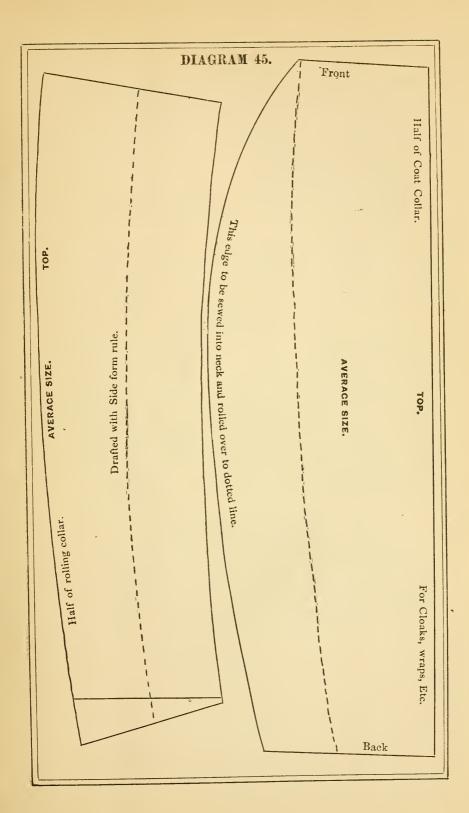
Draft the back by diagram except to allow one number at the waist extra; for example, if the waist-measure is 24, dot at 25, allowing 2 inches beyond for cutting away of the side-form.

The skirt may be composed of two plain widths or less, if the material is very wide, and after lining with crinoline may be laid in deep side-plaits, about one-half inch in width on the waist-line, and spreading out fan shape toward the bottom. They should be stayed underneath to within 16 inches of the bottom.

The skirt is sewed on to a band and fastened to the basque underneath at the waist; a rolling collar completes the neck, terminating at the end on the buttonhole-side, and to the first button on the other side.







## Front of Standard Wrap, with Dolman Sleeve.

A plain waist may be drafted, double or single-breasted.

The line for sleeve is shaped with side-form. The tabs at side are also shaped by the same rule.

Diagram 47 illustrates the sleeve. Coat sleeve may be substituted for the one indicated, if preferred.

Standing collar is preferable for this style of garment, when cut single-breasted.

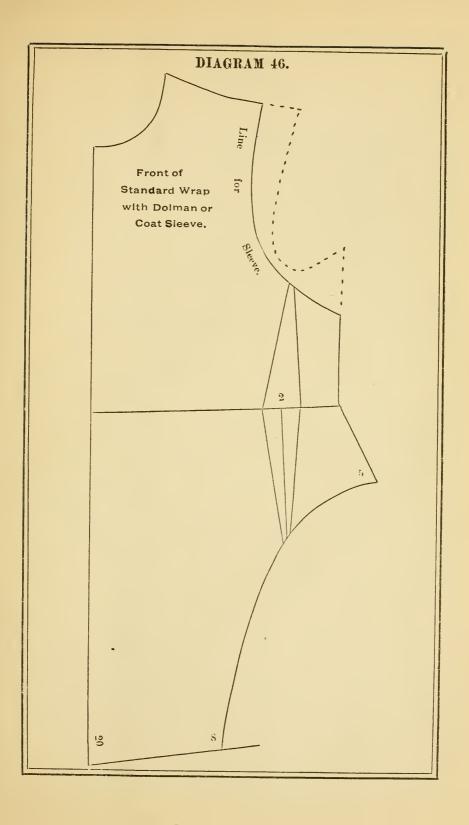
Back of garment is indicated by diagram 47 and is so simple that it requires little explanation to any one accustomed to drafting. The back is not susceptible of much change, except that plaits may be dispensed with, and the skirt be longer or shorter as preferred.

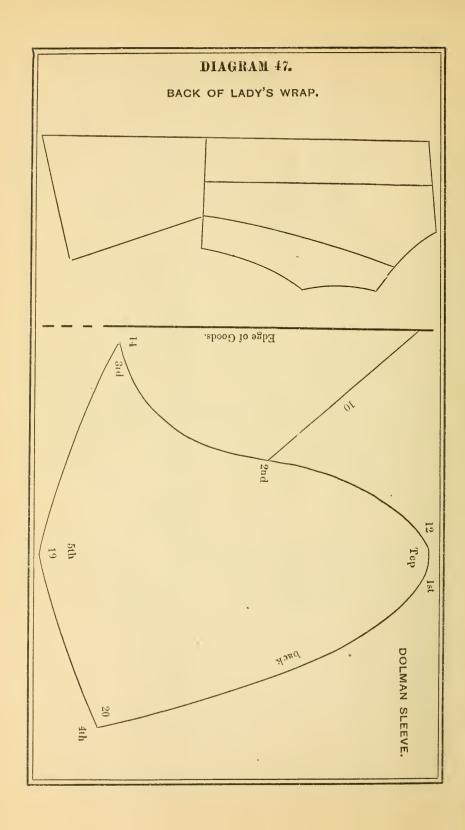
#### Sleeve for Standard Wrap.

Measure straight across 12 and make dot 1st; next measure diagonally 10 inches and dot 2nd; measure down 14 inches and dot 3d; measure across from dot 3d 20 inches and dot 4; measure straight down from 1st dot 9 inches and dot 5; shape with side-form-rule. The shape at bottom is a matter of taste and may be changed to suit. The top of sleeve is to be slightly gathered and is sewed into the wrap on the lines indicated by pattern. The lower part at dot 3d should terminate when finished at dot 5 on the front of wrap, and the corresponding dot 4, should terminate at 7 on the back when finished.

## Eight-Dart Basque.

Draft in the ordinary manner, except to add 4 inches for two under-arm darts, which should be placed on the pattern, equally distant from each other, and the under-arm seam. The waist may be drafted one-half inch longer also, as the line for length of waist is quite bias and requires this additional length.









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